SEQUENCE LISTING

<110> CHOO, YEN
ULLMAN, CHRISTOPHER GRAEME
CHUA, NAM-HAI
SANCHEZ, JUAN PABLO

<120> REGULATED GENE EXPRESSION IN PLANTS

<130> 674538-2001

<140> 09/732,348
<141> 2000-12-07

<150> PCT/GB00/02071
<151> 2000-05-30

<150> GB 9912635.1
<151> 1999-05-28

<150> GB 001578.4
<151> 2000-01-24

<150> GB 0001580.0
<151> 2000-01-24

<160> 34

<170> PatentIn Ver. 2.1

<210> 1
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 1
aaggagatat aacaatg 17

<210> 2
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 2
gtcgaccatg 10

<210> 3

<211> 60
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 3
ctcctgcagt tggacctgtg ccatggccgg ctgggccgca tagaatggaa caactaaagc 60

<210> 4
<211> 995
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 4
tctagagcgc cgccatggga gagaaggcgc tgccggtggt gtataagcgg tacatctgct 60
ctttcgccga ctgcggcgct gcttataaca agaactggaa actgcaggcg catctgtgca 120
aacacacagg agagaaacca tttccatgta aggaagaagg atgtgagaaa ggctttacct 180
cgcttcatca cttaacccgc cactcactca ctcatactgg cgagaaaaac ttcacatgtg 240
actcggatgg atgtgacttg agatttacta caaaggcaaa catgaagaag cactttaaca 300
gattccataa catcaagatc tgcgtctatg tgtgccattt tgagaactgt ggcaaagcat 360
tcaagaaaca caatcaatta aaggttcatc agttcagtca cacacagcag ctgccgtatg 420
cttgccctgt cgagtcctgc gatcgccgct tttctcgctc ggatgagctt acccgccata 480
tccgcatcca cacaggccag aagcccttcc agtgtcgaat ctgcatgcgt aacttcagtc 540
gtagtgacca ccttaccacc cacatccgca cccacacagg cgagaagcct tttgcctgtg 600
acatttgtgg gaggaagttt gccaggagtg atgaacgcaa gaggcatacc aaaatccatt 660
taagacagaa ggacgcggcc gcactcgagc ggaattccgg cccaaaaaag aagagaaagg 720
tcgccccccc gaccgatgtc agcctggggg acgagctcca cttagacggc gaggacgtgg 780
cgatggcgca tgccgacgcg ctagacgatt tcgatctgga catgttgggg gacggggatt 840
ccccggggcc gggatttacc ccccacgact ccgcccccta cggcgctctg gatacggccg 900
acttcgagtt tgagcagatg tttaccgatg cccttggaat tgacgagtac ggtggggaac 960
aaaaacttat ttctgaagaa gatctgtaag gatcc 995

<210> 5
<211> 947
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 5
tctagagcgc cgccatggga gagaaggcgc tgccggtggt gtataagcgg tacatctgct 60
ctttcgccga ctgcggcgct gcttataaca agaactggaa actgcaggcg catctgtgca 120
aacacacagg agagaaacca tttccatgta aggaagaagg atgtgagaaa ggctttacct 180
cgcttcatca cttaacccgc cactcactca ctcatactgg cgagaaaaac ttcacatgtg 240
actcggatgg atgtgacttg agatttacta caaaggcaaa catgaagaag cactttaaca 300
gattccataa catcaagatc tgcgtctatg tgtgccattt tgagaactgt ggcaaagcat 360

tcaagaaaca caatcaatta aaggttcatc agttcagtca cacacagcag ctgccgtatg 420
cttgccctgt cgagtcctgc gatcgccgct tttctcgctc ggatgagctt acccgccata 480
tccgcatcca cacaggccag aagcccttcc agtgtcgaat ctgcatgcgt aacttcagtc 540
gtagtgacca ccttaccacc cacatccgca cccacacagg cgagaagcct tttgcctgtg 600
acatttgtgg gaggaagttt gccaggagtg atgaacgcaa gaggcatacc aaaatccatt 660
taagacagaa ggacgcggcc gcactcgagc ggaattccgg cccaaaaaag aagagaaagg 720
tcgaacttca gctgacttcg gatgcattag atgactttga cttagatatg ctaggatctg 780
acgcgctaga cgatttcgat ctggacatgt tgggcagcga tgctctagac gatttcgatt 840
tagatatgct tggctcggat gccctggatg acttcgacct cgacatgctg tcaagtcagc 900
tgagccagga acaaaaactt atttctgaag aagatctgta aggatcc 947

<210> 6
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 6
aaggagatat aaca 14

<210> 7
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 7
tgcgtgggcg tgtacctgga tgggagacc 29

<210> 8
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 8
ccacgcgtcc atgggagaga aggcgctgcc ggtgg 35

<210> 9
<211> 44
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 9
ccactagtcc ttacagatct tcttcagaaa taagtttttg ttcc 44

<210> 10
<211> 148
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 10
cctctagatc ggtctcccat ccaggtacac gcccacgcaa gtcggtctcc catccaggta 60
cacgcccacg caagtcggtc tcccatccag gtacacgccc acgcaagtcg gtctcccatc 120
caggtacacg cccacgcaag aagcttcc 148

<210> 11
<211> 148
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 11
ggaagcttct tgcgtgggcg tgtacctgga tgggagaccg acttgcgtgg gcgtgtacct 60
ggatgggaga ccgacttgcg tgggcgtgta cctggatggg agaccgactt gcgtgggcgt 120
gtacctggat gggagaccga tctagagg 148

<210> 12
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA
sequence

<400> 12
ccagatctgg tctcccatcc aggtacacgc ccacgcaaga tctcc 45

<210> 13
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

sequence

<400> 13
ggagatcttg cgtgggcgtg tacctggatg ggagaccaga tctcgg 46

<210> 14
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 14
ccccatggtg agcaagggcg aggagctgtt cacc 34

<210> 15
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 15
ccgaattctt acttgtacag ctcgtccatg ccgag 35

<210> 16
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 16
ccctcgagcg gggtaccgcg ggcccggg 28

<210> 17
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 17
cagttggaat tctagagtcg cggccgctac 30

<210> 18
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 18
ccgctcgagg ccccccccgac cgatgtcagc ctggggga 38

<210> 19
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 19
ccgctcgagt attaatttga gaatgaacaa aaaggacc 38

<210> 20
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 20
gccattaatc ggaatgggag agaaggcgct gccggtgg 38

<210> 21
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 21
gcctattaat ttgagaatga acaaaaagga cc 32

<210> 22
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc finger formula structure

<220>
<221> MOD_RES
<222> (1)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (3)..(6)
<223> Any amino acid and this region may encompass 2-4 amino acids

<220>
<221> MOD_RES
<222> (8)..(10)
<223> Any amino acid and this region may encompass 2-3 amino acids

<220>
<221> MOD_RES
<222> (12)..(16)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (18)..(19)
<223> Any amino acid

<220>
<221> MOD_RES
<222> (21)..(23)
<223> Any amino acid

<400> 22
Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Leu Xaa Xaa His Xaa Xaa Xaa His
20

<210> 23
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic linker sequence

<400> 23
Thr Gly Glu Lys
1

<210> 24
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
linker sequence

<400> 24
Thr Gly Glu Lys Pro
1 5

<210> 25
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Consensus
structure sequence

<400> 25
Pro Tyr Lys Cys Pro Glu Cys Gly Lys Ser Phe Ser Gln Lys Ser Asp
1 5 10 15

Leu Val Lys His Gln Arg Thr His Thr Gly
20 25

<210> 26
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Consensus
structure sequence

<400> 26
Pro Tyr Lys Cys Ser Glu Cys Gly Lys Ala Phe Ser Gln Lys Ser Asn
1 5 10 15

Leu Thr Arg His Gln Arg Ile His Thr Gly Glu Lys Pro
20 25

<210> 27
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Illustrative

leader peptide

<400> 27
Met Ala Glu Glu Lys Pro
1 5

<210> 28
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic zinc finger 4 amino acid sequence, including the flanking sequence as used in the composite protein of the invention

<400> 28
Asn Ile Lys Ile Cys Val Tyr Val Cys His Phe Glu Asn Cys Gly Lys
1 5 10 15

Ala Phe Lys Lys His Asn Gln Leu Lys Val His Gln Phe Ser His Thr
20 25 30

Gln Gln Leu Pro
35

<210> 29
<211> 108
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic nucleotide sequence of zinc finger 4, including the flanking sequence

<400> 29
aacatcaaga tctgcgtcta tgtgtgccat tttgagaact gtggcaaagc attcaagaaa 60
cacaatcaat taaaggttca tcagttcagt cacacacagc agctgccg 108

<210> 30
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic construct sequence

<400> 30
ggtctcccat caggtacacg cccacgca 28

<210> 31
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic construct sequence

<400> 31
ggtctcccat caggtacacg cgcacgca 28

<210> 32
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 32
ggatgggaga c 11

<210> 33
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA sequence

<400> 33
gcgtgggcgt 10

<210> 34
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: zinc finger framework

<220>
<221> MISC_FEATURE
<222> (1)..(2)
<223> Xaa = any amino acid Xaa may be present or absent

<220>
<221> MISC_FEATURE
<222> (4)..(8)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (5)..(8)
<223> Xaa may be present or absent

<220>
<221> MISC_FEATURE
<222> (10)..(23)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (19)..(23)
<223> Xaa may be present or absent

<220>
<221> MISC_FEATURE
<222> (25)..(30)
<223> Xaa = any amino acid

<220>
<221> MISC_FEATURE
<222> (28)..(30)
<223> Xaa may be present or absent

<220>
<221> MISC_FEATURE
<222> (31)..(31)
<223> Xaa = His or Cys

<400> 34

```
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1               5                   10                  15


Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa Xaa
            20                  25                  30
```